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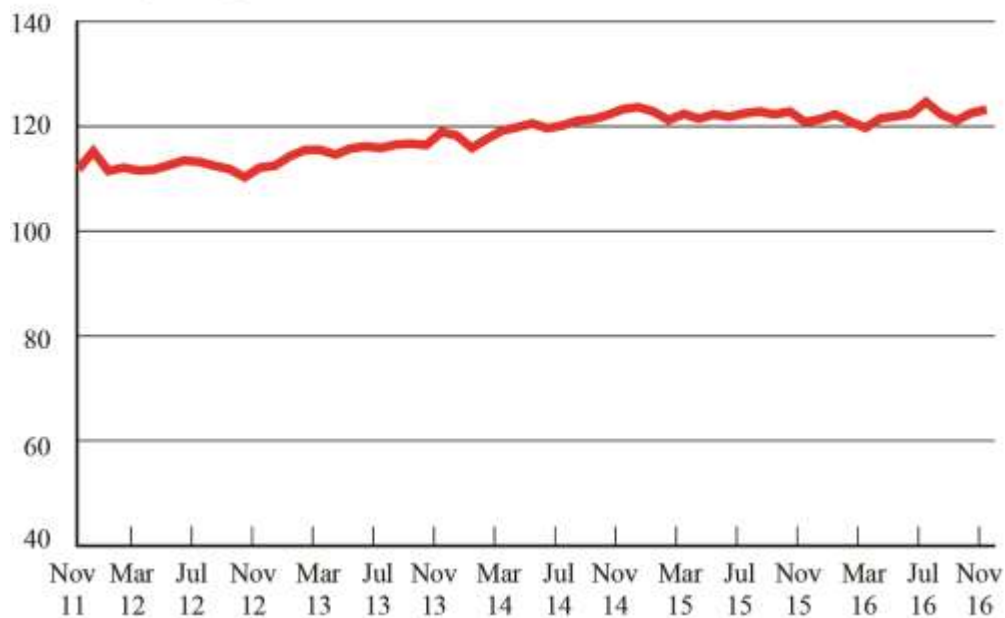
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November 2016 Freight Transportation Services Index (TSI)

The Freight Transportation Services Index (TSI), which is based on the amount of freight carried by the for-hire transportation industry, rose 0.5 percent in November from October, rising for the second consecutive month, according to the U.S. Department of Transportation's Bureau of Transportation Statistics' (BTS). The November 2016 index level (123.2) was 30.1 percent above the April 2009 low during the most recent recession (Tables 1, 2, and 2A).

Freight Transportation Services Index, November 2011 - November 2016
Monthly average of 2000 = 100



The level of for-hire freight shipments in November measured by the Freight TSI (123.2) was 1.2 percent below the all-time high level of 124.7 in July 2016 (Table 2A). BTS' TSI records begin in 2000. See historical [TSI data](#).

The October index was revised to 122.6 from 122.0 in last month's release and the September index from 120.8 to 121.1. Monthly numbers for July and August were revised up slightly.

The Freight TSI measures the month-to-month changes in for-hire freight shipments by mode of transportation in tons and ton-miles, which are combined into one index. The index measures the output of the for-hire freight transportation industry and consists of data from for-hire trucking, rail, inland waterways, pipelines and air freight. The TSI is seasonally-adjusted to remove regular seasons from month-to-month comparisons.

Analysis: The November increase was broad in terms of mode. All freight modes grew from October except for pipeline (data on individual modes are [seasonally adjusted](#) by BTS). The November rise took place in the context of mixed signals in other economic indicators that often impact transportation – employment increased by 178,000 jobs, retail sales rose by 0.1 percent, and personal income grew by less than 0.1 percent, while the [Federal Reserve Board Industrial Production index](#) declined by 0.4 percent, and housing starts declined by 4.7 percent from October.

Trend: The 0.5 percent Freight TSI rise in November combined with the October increase of 1.2 percent brought the index to 1.7 percent above its September level, the low-point since March. The November level was still 1.2 percent below its record high of 124.7 in July 2016. In the last 12 months the index rose in eight months and declined in four months, for a total increase of 2.0 percent. The November level was the second highest level the Freight TSI reached since December 2014. The index has risen 30.1 percent since the low of 94.7 in April 2009. For additional historical data, go to [TSI data](#).

Index highs and lows: For-hire freight shipments in November 2016 (123.2) were 30.1 percent higher than the recent low in April 2009 during the recession (94.7). The November 2016 level was 1.2 percent below the historic peak reached in July 2016 (124.7) (Table 1A).

Year to date: For-hire freight shipments measured by the index were up 1.5 percent in November compared to the end of 2015 (Table 3).

Long-term trend: For-hire freight shipments are up 10.1 percent in the five years from November 2011 and are up 13.7 percent in the 10 years from November 2006 (Table 5).

Same month of previous year: November 2016 for-hire freight shipments were up 2.0 percent from November 2015 (Tables 4, 5).

The TSI uses seasonally adjusted data on for-hire freight and passenger transportation services to create three indexes measuring monthly changes in transportation services output from the base year of 2000. The three indexes are for-hire freight shipments, passenger travel, and a combined measure that merges freight and passenger indexes. See [Seasonally-Adjusted Transportation Data](#) for numbers for individual modes. TSI includes data from 2000 to the present. Release of the December 2016 index is scheduled for Feb 8.

Passenger Index: The TSI for passengers rose 0.6 percent in November from its October level (Table 6). The Passenger TSI November 2016 level of 123.1 was 0.3 percent below the November 2015 level (Table 7). The index is up 6.8 percent in five years and up 8.8 percent in 10 years (Table 5). The passenger TSI measures the month-to-month changes in travel that involves the services of the for-hire passenger transportation sector. The seasonally-adjusted index consists of data from air, local transit and intercity rail.

Combined Index: The combined freight and passenger TSI rose 0.5 percent in November from its October level (Table 8). The combined TSI November 2016 level of 123.3 was 1.3 percent above the November 2015 level (Table 9). The combined index is up 9.2 percent in five years and up 12.1 percent in 10 years (Table 5). The combined TSI merges the freight and passenger indexes into a single index.

Revisions: Monthly data has changed from previous releases due to the use of concurrent seasonal analysis, which results in seasonal analysis factors changing as each month's data are added.

BTS research has shown a clear relationship between economic cycles and the Freight and Passenger Transportation Services Indexes. See a [study of this relationship](#) using smoothed and detrended TSI data. Researchers who wish to compare TSI over time with other economic indicators, can use the [FRED database](#), which includes freight, passenger and combined TSI, and which makes it possible to easily graph TSI alongside the other series in that database. See [TSI data on FRED](#).

For a webinar on the TSI, see [Past Webinars](#). For a video explanation of the TSI, see [Overview of the Transportation Services Index](#). A BTS report explaining the TSI, [Transportation Services Index and the Economy](#), is available for download.

Table 1: Freight, Passenger and Combined Transportation Services Indexes since May 2016

Percent Change from Previous Month

(Seasonally-Adjusted, Monthly Average of 2000 = 100)

	Freight		Passenger		Combined	
	Index	Pct. Change	Index	Pct. Change	Index	Pct. Change
May	121.9	0.2	124.2	0.2	122.7	0.2
June	122.4	0.4	125.4	1.0	123.4	0.6
July	124.7	1.9	124.3	-0.9	124.7	1.1
August	122.3	-1.9	123.0	-1.0	122.6	-1.7
September	121.1	-1.0	124.7	1.4	122.3	-0.2
October	122.6	1.2	122.4	-1.8	122.7	0.3
November	123.2	0.5	123.1	0.6	123.3	0.5

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

Table 1A: Annual High and Low Points in Freight Transportation Services Index, 2009-2016

Year	Month	Peak	Month	Bottom
2009	June	101.5	April	94.7
2012	May	113.5	April	110.3
2013	November	118.9	January	114.3
2014	December	123.7	July	115.9
2015	January	122.8	November	120.8
2016 (thru November)	July	124.7	March	119.7

SOURCE: Bureau of Transportation Statistics

Table 2: Freight Transportation Services Index Monthly Changes, 2013-2016
Percent change from previous month

	2013	2014	2015	2016
	% Change	% Change	% Change	% Change
January	1.6	-2.0	-0.7	0.7
February	1.0	1.5	-1.3	-1.1
March	0.0	1.4	1.0	-1.0
April	-0.8	0.5	-0.7	1.6
May	1.0	0.7	0.7	0.2
June	0.3	-0.8	-0.4	0.4
July	-0.3	0.5	0.6	1.9
August	0.5	0.7	0.2	-1.9
September	0.2	0.2	-0.4	-1.0
October	-0.3	0.7	0.4	1.2
November	2.1	0.9	-1.6	0.5
December	-0.5	0.3	0.5	

SOURCE: Bureau of Transportation Statistics

Table 2A: Freight Transportation Services Index by Month, 2013-2016

	2013	2014	2015	2016
January	114.3	115.9	122.8	122.3
February	115.5	117.6	121.2	120.9
March	115.5	119.2	122.4	119.7
April	114.6	119.8	121.5	121.6
May	115.8	120.6	122.3	121.9
June	116.2	119.6	121.8	122.4
July	115.9	120.2	122.5	124.7
August	116.5	121.1	122.8	122.3
September	116.7	121.4	122.3	121.1
October	116.4	122.2	122.8	122.6
November	118.9	123.3	120.8	123.2
December	118.3	123.7	121.4	

SOURCE: Bureau of Transportation Statistics

Table 3: Freight, Passenger and Combined Transportation Services Indexes Year-to-Date Change, 2007-2016
Percent change to November from December of the previous year

Year	Freight	Passenger	Combined
2007	-0.1	3.3	0.8
2008	-5.9	-4.9	-5.5
2009	0.9	-1.1	0.2
2010	5.8	3.1	5.0
2011	2.8	1.9	2.5
2012	-2.7	0.0	-1.9
2013	5.7	2.3	4.7
2014	4.2	1.6	3.5
2015	-2.3	2.2	-1.0
2016	1.5	-1.1	0.7

SOURCE: Bureau of Transportation Statistics

Table 4: Freight Transportation Services Index from Year-to-Year Percent Change in the November Freight TSI
(Monthly average of 2000 = 100)

	November Freight TSI	Percent change from same month previous year
2007	110.6	2.0
2008	104.3	-5.7
2009	101.2	-3.0
2010	107.4	6.1
2011	111.9	4.2
2012	112.1	0.2
2013	118.9	6.1
2014	123.3	3.7
2015	120.8	-2.0
2016	123.2	2.0

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

**Table 5: Transportation Services Indexes from Previous Years
Percent Change to 2016 (November to November)**

Since November ...	Duration in years	Freight TSI Percent change to November 2016	Passenger TSI Percent change to November 2016	Combined TSI Percent change to November 2016
2015	1	2.0	-0.3	1.3
2014	2	-0.1	2.8	0.8
2013	3	3.6	3.7	3.7
2012	4	9.9	6.4	8.9
2011	5	10.1	6.8	9.2
2010	6	14.7	8.2	12.7
2009	7	21.7	12.7	19.0
2008	8	18.1	11.3	15.9
2007	9	11.4	4.9	9.4
2006	10	13.7	8.8	12.1

SOURCE: Bureau of Transportation Statistics

**Table 6: Passenger Transportation Services Index Monthly Changes, 2013-2016
Percent change from previous month**

	2013 % Change	2014 % Change	2015 % Change	2016 % Change
January	0.9	-0.1	-0.8	-0.9
February	-0.3	-0.3	-1.3	0.5
March	-0.5	2.1	2.4	-1.4
April	0.7	-0.1	0.2	1.3
May	-0.1	0.4	0.1	0.2
June	0.7	-0.7	0.4	1.0
July	-1.0	0.1	1.9	-0.9
August	0.9	0.7	-1.4	-1.0
September	-0.1	-0.3	0.2	1.4
October	0.3	0.6	1.7	-1.8
November	0.8	-0.7	-1.2	0.6
December	-0.7	0.9	0.8	

SOURCE: Bureau of Transportation Statistics

Table 7: Passenger Transportation Services Index from Year-to-Year
Percent change in the November Passenger TSI
(Monthly average of 2000 = 100)

	November Passenger TSI	Percent change from same month previous year
2007	117.3	3.7
2008	110.6	-5.7
2009	109.2	-1.3
2010	113.8	4.2
2011	115.3	1.3
2012	115.7	0.3
2013	118.7	2.6
2014	119.8	0.9
2015	123.5	3.1
2016	123.1	-0.3

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

Table 8: Combined Transportation Services Index Monthly Changes, 2013-2016
Percent change from previous month

	2013 % Change	2014 % Change	2015 % Change	2016 % Change
January	1.4	-1.4	-0.7	0.2
February	0.7	0.9	-1.3	-0.6
March	-0.2	1.5	1.5	-1.1
April	-0.3	0.4	-0.6	1.5
May	0.7	0.6	0.6	0.2
June	0.4	-0.8	-0.2	0.6
July	-0.5	0.4	1.1	1.1
August	0.6	0.7	-0.3	-1.7
September	0.1	0.2	-0.2	-0.2
October	0.0	0.6	0.8	0.3
November	1.7	0.4	-1.5	0.5
December	-0.6	0.5	0.6	

SOURCE: Bureau of Transportation Statistics

Table 9: Combined Transportation Services Index from Year-to-Year
Percent change in the November Combined TSI
(Monthly average of 2000 = 100)

	November Combined TSI	Percent change from same month previous year
2007	112.7	2.5
2008	106.4	-5.6
2009	103.6	-2.6
2010	109.4	5.6
2011	112.9	3.2
2012	113.2	0.3
2013	118.9	5.0
2014	122.3	2.9
2015	121.7	-0.5
2016	123.3	1.3

SOURCE: Bureau of Transportation Statistics

NOTE: Percent changes based on numbers prior to rounding.

Brief Explanation of the TSI

The Transportation Services Index (TSI) is a measure of the month-to-month changes in the output of services provided by the for-hire transportation industries. The freight index measure changes in freight shipments while the passenger index measures changes in passenger travel.

The TSI tells us how the output of transportation services has increased or decreased from month to month. The index can be examined together with other economic indicators to produce a better understanding of the current and future course of the economy. The movement of the index over time can be compared with other economic measures to understand the relationship of changes in transportation output to changes in Gross Domestic Product (GDP).

The freight transportation index consists of:

For-hire trucking,

Railroad freight services (including rail based intermodal shipments such as containers on flat cars),

Inland waterways transportation,

Pipeline transportation (including principally petroleum and petroleum products and natural gas), and

Air freight.

The index does not include international or coastal waterborne movements, private trucking, courier services, or the US Postal Service.

The passenger transportation index consists of:

Local transit,

Intercity passenger rail, and

Passenger air transportation.

The index does not include intercity bus, sightseeing services, ferry services, taxi service, private automobile usage, or bicycling and other non-motorized transportation.

The TSI includes only domestic "for-hire" freight and passenger transportation. For-hire transportation consists of freight or passenger transport services provided by a firm to external customers for a fee. The TSI does not include taxi services, paid ride services in personal motor vehicles (e.g., Uber, Lyft, etc.), intercity bus services, in-house transportation (vehicles owned and operated by private firms for their own use), or noncommercial passenger travel (e.g., trips in the household car).